Background

Seattle Public Utilities (SPU) hosted a community meeting on September 23, 2014 at Luther Memorial Lutheran Church (13047 Greenwood Avenue N) from 6 to 8:45 pm. The primary purpose of the meeting was to introduce the four leading paired 12th Avenue NW basin (western portion of Broadview) sewer and drainage alternatives and criteria SPU is using to evaluate these alternatives.

Staff

Seattle Public Utilities

- Celia Kennedy (Project Manager)
- Debbie Harris (Senior Civil Engineer)
- Rachel Garrett (Communications Lead)
- Vickie Kobayashi (Field Operations and Maintenance)

Consultant team

- Bruce Ball (Brown & Caldwell)
- Bob Jacobsen (Brown & Caldwell)
- David Scott (Tetra Tech)
- Jeff Lykken (HDR)
- Alice Lancaster (Herrera Environmental Consulting)
- Angie Thomson (EnviroIssues)
- Adonis Ducksworth (EnviroIssues)

Welcome and introductions

Attendees were given handouts that illustrated the four leading paired 12th Avenue NW area drainage and sewer alternatives and their related components. Attendees also had the opportunity to review the following boards:

- Broadview basin map
- Project overview, goals, process, and timeline
- Surcharged sewer areas map
- Maps of four leading 12th Avenue NW paired sewer and drainage alternatives showing key components
- Preventative maintenance map
- Drainage level of service map

Angie Thomson (facilitator) welcomed attendees to the meeting and reviewed the agenda. She noted that the primary purpose of the meeting was to discuss the four leading paired 12th Avenue NW area drainage and sewer alternatives. The meeting was also an opportunity for the community to stay informed about the progress SPU has made to date and give feedback on the alternatives presented.

Presentation
Angie introduced Celia Kennedy (SPU), Project Manager. Celia began with an overview of the project goals, why improvements are needed in Broadview, work SPU has completed to date, and the current state of the project's funding and phasing process.

Celia introduced David Scott (Tetra Tech) and Alice Lancaster (Herrera Consulting). David discussed the sewer components and Alice discussed the drainage components of the four paired alternatives as well as the process for coming to a decision on the four paired leading alternatives. David and Alice also discussed the advantages and challenges of the alternatives presented. Following David and Alice's presentations, Celia Kennedy talked about the costs of the four alternatives compared to the available funding.

See the table below for a list of the four leading paired 12th Avenue NW area drainage and sewer alternatives.

Alternative	Sewer Components	Drainage Components
A	Reduce flows into sewer pipes French drains Sewer tank storage (if needed)	Stormwater pipe storage Stormwater cascades Increase storm drain flow capacity
B	Reduce flows into sewer pipes French drains Sewer tank storage (if needed)	Stormwater pond Stormwater cascades Increase storm drain flow capacity
C	Sewer tank storage Increase sewer size French drains	Stormwater pond Increase storm drain flow capacity
D	Sewer pipe storage Increase sewer size French drains	Stormwater pond Increase storm drain flow capacity

Question and answer session for 12th Avenue NW paired sewer and drainage alternatives
Following the presentation, Angie facilitated a question and answer session about the paired alternatives presented. Questions and comments are outlined below. Answers to questions by the project team are noted in italics.

Is the current projected funding of $23 million for both sewer and drainage improvements in the 12th Avenue NW and Dayton Avenue N basins? What's available for 12th Avenue NW drainage?

Yes, the $23 million is for work in both the 12th Avenue NW and Dayton Avenue N basins. This money is anticipated for the budget from 2015 through 2020. We are currently assessing other funding sources. We have not prioritized the funding for either basin.

How do you determine the relationship between where homes are located and the different levels of service?

Levels of service of service (LOS) are based on modeling results that take into consideration the elevation of homes and what happens in the sewer/drainage system during different storm events.

How did you determine who would be included in the backflow valve pilot project?

We evaluated who was at most risk for a sewer backup in Broadview based on the information we had at that time.

Do you think of the LOS differently if there is a finished basement?

If the water would reach the bottom of the house, including the basement, we would consider that home at risk for flooding. There is no preferential treatment for a finished basement or an unfinished basement.

Will French Drains be on individual private properties or in the streets?

If they are built, they would be under the streets and within the City right-of-way.

Will you remove sidewalks or parking for the stormwater cascades?

We will not be removing sidewalks but there will be construction and parking impacts. We are taking these impacts into consideration and would like your feedback on them tonight and during the design phase, if we select an alternative that includes stormwater cascades.

What is the size of the Phase 1 Madison Valley Stormwater Project compared to the stormwater pond considered for Broadview?

Madison Valley takes up one-half of a city block (about seven properties), and has a capacity of 1.7 million gallons of water, though there is rarely water present. The stormwater pond we are considering for Broadview is about a third the size of the Madison Valley landscaped stormwater holding area (Phase 1 Project). All the properties used for the Madison Valley Stormwater Project were purchased from willing sellers.

How will storm drainage be managed coming down the hill toward the west from NW 125th Street and NW 132nd Street?

While we will be increasing drainage capacity in some areas, we have not yet looked at specific designs for these streets.

Our house is in the center of the circle representing the stormwater pond; will this impact our ability to sell our house?

We have not yet selected a preferred alternative, and therefore have not determined exact property acquisition location or timing, or whether property will need to be purchased. Timing of property acquisition, if needed, would also be dependent upon project prioritization and funding availability. We plan to meet with potentially affected neighbors in the near future, before any decisions are made. By the end of 2015, we will know more about potential property impacts. Should private property need to be acquired, we will look for willing sellers. Hearing from you at meetings like this is also an important part of that process.

Why would a stormwater pipe be more expensive than a sewer pipe?

For our storage options, the stormwater storage pipe is a little smaller in diameter than the proposed sewer storage pipe, thus it needs to be longer. The estimated length of the storm drain storage pipe is 2,600 feet and the estimated length of the sewer storage pipe is 1,240. When adding the additional needs of the sewer storage pipe like pumps, odor control, electrical needs, and upstream improvements, the costs for the two options are equal. However, the costs presented have been capital project costs, rather than the cost of maintaining the pipes over their life cycle. Once life cycle costs are included, the sewer storage pipe will likely cost more than the stormwater storage pipe.

There has been a lot of talk about property acquisition. Why isn't Carkeek Park on the table?

SPU considered Carkeek Park storage as a possible option during the analysis of sewer alternatives for the 12th Avenue NW basin. There are many problems associated with storage in Carkeek Park, including the following:

- *Carkeek Park could be used to store sewer flows from the 12th Avenue NW sewer basin and the Dayton Avenue N sewer basin. The estimated cost for this option is about $60 million; not including any priority (flooding to homes) drainage improvements. We do not have available funding to build this type of facility, and building this type of facility cannot be completed in phases.*
- *Even if we had the available budget to build this project it would take about three years longer than any other option to design and build, and there is a risk it would take even longer than that.*

- *Construction in Carkeek Park would be very challenging from an environmental and permitting standpoint, and steep slopes also pose a significant risk during construction and for the pipes in the long-term.*
- *We would likely have very strong public opposition for building in Carkeek Park, which could cause delays and use up available resources for the project work.*

I am concerned about walkability in the neighborhood. Do some of the alternatives impact our ability to walk in our neighborhood? Do your criteria include walkability?

Walkability is something we will consider, especially in the design phase of the work.

Will there be more money available during the implementation phase of the project? How do property taxes play into the budget?

SPU operates from rate-based funding. This means we do not generally receive tax money from residents; we receive money from utility rate payers. We are looking at using some of that money for this project.

Are you looking to put cascades on the north side of NW 125 Street? If so, where will they be placed?

We are in the planning phase of the project. The exact placement of the cascades, if they are included as part of the preferred alternative, would be determined during the design phase of the project. The public will be involved during the design phase as well.

Have you gone out in the field and compared your models with what is happening in the real world?

Yes. We have compared actual field observations flow monitoring data to what the computer models are predicting.

Given the budget, what are your priorities and how do you figure out where to start?

Reducing the risk of sewer backups has been and continues to be our first priority because it is a public health issue. Reducing stormwater flooding into homes is our second highest priority. To prioritize the work we will assess what the risks are of these events happening, the associated costs of these risks, and what work would most reduce the risks.

How can we help you get the remaining money you need for both 12th and Dayton? While we wait for the money, what are you currently doing to protect us? Are there small solutions you can implement?

You can send a letter of support for the project to SPU's director. There may be some early actions that SPU can implement. We will be examining those as well. One early action may be to offer backflow valves to more property owners.

How would you keep a stormwater pond clean and safe?

Please take a look the Midvale pond (located at 10735 Stone Avenue N, a few blocks northeast of the intersection of Aurora Avenue N and Northgate Way) as an example of a recently built SPU stormwater pond. Eagles, blue herons and ducks now visit this site. It is clean, safe, and well-maintained. The Madison Valley Stormwater Phase 1 Project (mostly grassy/landscaped area) at 30th Avenue E and E John Street is another recent example of an SPU-built stormwater project.

If a stormwater pond were included as part of the preferred alternative, it would be designed with shallow side slopes for safety, native plants and it would be designed to not have stagnant water. Since the water would be flowing out of the site as soon as capacity is available downstream, it would not be a home for mosquitos. In addition, if it was built, regular maintenance activities would take place to keep it clean and operational.

Please remember to consider pedestrian safety with regard to planting when thinking about cascades.

Comment noted.

If you are going to be doing construction in the street, will you be coordinating with the Seattle Department of Transportation (SDOT)?

Yes, we will be working with SDOT.

Have you considered the cost of replacing all the sewer and drainage pipes should an earthquake occur?

We will be looking at seismic vulnerability of the system. This analysis will happen during the design phase of the project.

What is the process for acquiring property, will we be dealing with real people? When would the property acquisition process start?

If the alternative selected requires the purchase of private property, which has not been determined yet, yes, the property owners affected would be working with an agent from the City's real estate services department. The timing of property acquisition depends on the prioritization process and the available funding. Since we do not have sufficient funds to build all the improvements at the same time, the work will be phased. In the event that we need to purchase property, we may not purchase property for a number of years.

Have you considered using the city-owned properties at the north end of Carkeek Park to increase drainage capacity?

Yes we have and there are a number of challenges to using these areas, including:

- *It would impact the stream, and depending on the stream conditions and natural habitat, it would make it difficult to permit.*
- *It could impact the stability of steep slope (almost vertical) and would not meet the steep slope setbacks prescribed by City code.*
- *A stormwater pond at that location would necessitate the creation of a dam.*
- *The steep slopes would make a facility hard to access for maintenance and operations.*
- *The area is not large enough for the required storage, and could require the acquisition of additional properties in the Carkeek Park area.*

The vegetation in the existing cascades is overgrown. Will the proposed cascades be planted similarly?

No, they will be different. There has been a lot of progress in identifying improved plant choices for these cascade type systems .

Additional comments during the question and answer session

- Your circles get smaller when you take into account ravines and the $1 million dollar homes in the area. That leaves only a few potential properties for acquisition.
- In 2008 the sewer task force started documenting drainage problems. This is how we came to work with SPU on our sewer and drainage problems. To continue this momentum, please remember the importance of documenting your sewer and drainage problems.
- Please go out and ground truth your proposed improvements.
- When you fix a drainage problem in one area, it affects another area. Please consider the notion that when you "spot" fix drainage problems in one area, they just move somewhere else.
- For a real cost of the project you need to consider the operations and maintenance cost of the preferred alternative in your evaluation criteria.
- When evaluating the $14 million dollar increased cost for stormwater pipes, please consider it in the context of the whole project.

Next Steps

The next step is for the project team to consider the input we have received from the community along with our technical options analysis evaluation work and propose a recommended solution. We will continue to engage the community as we move toward making a decision on a preferred alternative, and will address individual questions and comments as quickly as we are able.